

Cadastral TWG I-Team Plan submittal

Idaho Framework Implementation Plan

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7A) Public Land Survey System

BLM, Tom Spencer

FS,

Idaho Dept. of Lands,

Idaho Dept. of Transportation - NGS Advisor,

Counties, Surveyors

7B) Administrative Ownership

Counties, Recorders

BLM,

FS,

Idaho Dept. of Lands,

7C) Parcel Ownership

County Assessors

Idaho State Tax Commission

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Budget and Schedule Summary

Theme Type	Priority (1 – 3)	Time Frame	1 st Year Cost	Total Cost
Cadastral	1	10 years	\$500,000	\$5,000,000

Section 4

Theme Summaries

Cadastral

To complete a Cadastral layer for the State of Idaho, an estimated total of \$5,000,000 will be required. Of this, the first-year cost is estimated at approximately \$500,000. This figure represents varying degrees of work for the 2,490 townships in Idaho, and does not include the ongoing Operations and Management (maintenance) necessary to keep the layer current.

Data development tasks include: 1) the inventory and evaluation of existing datasets, 2) the collection of Public Land Survey System (PLSS) information to build the BLM Geographic Coordinate Database model (GCDB) for townships not yet developed, 3) Improvement of the PLSS/GCDB for collected townships not meeting current standards, 4) the Integration of additional information sources with the GCDB to increase spatial and measurement accuracy, and 5) the collection and integration of Parcel Data with the PLSS/GCDB.

Of Idaho's 2,490 townships, 2048 have been totally collected, 71 have been partially collected, and 371 remain uncollected. Each township will need to be analyzed for the need to improve spatial and measurement accuracy using available survey information and/or additional survey collection. State agencies maintain many survey records that could be inventoried for data contribution. County Recorder's Offices file Subdivision Plats and Records of Surveys and Corner Perpetuations, which need inventoried for retrieving current survey information. County Assessor's Offices produce tax parcel maps, which will need to be integrated into the GCDB model.

Organizational tasks include: 1) establishing an oversight committee for the initial development and on-going maintenance of the Idaho Cadastral Data program, 2) the development of a statewide database and web server to uniformly collect, organize, track and report development, and to serve and communicate cadastral data to users and stakeholders, 3) inventory and involve cadastral data stakeholders throughout the state.

The development strategy is to first complete statewide organizational tasks, and facilitate voluntary statewide data contribution while completing prioritized detailed project areas on an annual basis.

Section 11

Cadastral Data

Theme Description:

(From Cadastral Data Content Standard for the National Spatial Data Infrastructure)

Cadastral data are defined as the geographic extent of the past, current, and future rights and interests in real property including the spatial information necessary to describe that geographic extent. Rights and interests are the benefits or enjoyment in real property that can be conveyed, transferred, or otherwise allocated to another for economic remuneration. Rights and interests are recorded in land record documents. The spatial information necessary to describe rights and interests includes surveys and legal description frameworks such as the Public Land Survey System, as well as parcel-by-parcel surveys and descriptions.

The Cadastral Core Data have been summarized into three groups:

Spatial Reference - This is the geodetic and geographic control necessary to reference parcel information to a real world coordinate system. Spatial reference begins with geodetic network system that can be densified with a High Accuracy Reference Network (HARN) and then further extended to base maps and orthophotography. This data layer is addressed under the Geodetic Control Framework Data, Section 5.

Cadastral Reference - This is the information necessary to fit the parcel information into a continuous and related fabric. In Idaho, the Public land Survey System (PLSS) is the basis of cadastral reference. The natural nesting of legal descriptions from municipal boundaries to subdivision exteriors to blocks and lots also forms this cadastral reference.

(From Utah Framework Data Implementation Plan)

The Public Land Survey System (PLSS) is a rectangular survey system that typically divides the land into 6-mile square townships, which are further subdivided into 1-mile square sections. The extension of the rectangular system of surveys over the public domain has been in progress since 1785. The PLSS is the primary survey and legal description system for defining the boundaries of the parcels of public lands, and forms the basis of patents issued when public lands pass out of Federal ownership. The legal descriptions for most of the western United States originate from the PLSS. Because the PLSS is the basis for all public and private land entitlement in the West, it is a critical component of the cadastral (land ownership) layer, one of 18 primary “framework” themes identified by the Federal Geographic Data Committee (FGDC) for implementation of the National Spatial Data Infrastructure (NSDI). The PLSS provides the spatial reference system for land ownership and title information.

Government organizations and private industry use the PLSS to portray parcel boundary and land record information in day-to-day business processes involving land transactions and entitlement; and as a foundation theme in Geographic Information Systems (GIS) to support analysis, planning, and decision making on complex land and resource issues. Many different representations of the PLSS exist that vary significantly in both content and accuracy, resulting in conflicting sources of information. The increasing use of Geographic Information Systems (GIS) in both the public and private sectors, and greater necessity for collaboration, identifies the need for a common, integrated cadastral infrastructure to facilitate decision-making at all levels.

In the early 1990s, the Bureau of Land Management (BLM) began collecting the Geographic Coordinate Data Base (GCDB). The GCDB is a digital representation of the PLSS that provides geographic positions to tie land

ownership (cadastral) and other themes to the earth's surface. GCDB integrates survey records, horizontal control, and land descriptions to portray the legal land parcels described by the PLSS. GCDB is the preferred data source to portray parcel boundary and land record information in both public and private sectors. Unlike other PLSS representations, the GCDB depicts the PLSS to the public land parcel level, and can be readily updated with newer, more accurate information to increase its positional reliability. GCDB provides a more accurate PLSS land grid for parcel mapping at the local level.

The Western Governors Association (WGA) recognizes the GCDB as the “best hope of standardizing the PLSS in the Western States”, and strongly endorses its use and continued enhancement. In June, 2000, WGA adopted WGA Policy Resolution 00-005, Public Lands Survey System and Ownership Database, and recommended that a unified plan for GCDB implementation across the West be developed in coordination with federal, state, tribal and local governments. The WGA planning effort is parallel with the Office of Management and Budget's (OMB) Information Initiative to align the needs and resources to continue development of NSDI framework implementation through mutually beneficial partnerships.

Parcels - This is the parcel core information. Once the reference system have been established this is the core information about parcels.

Parcel level data represent the further division of the PLSS into individually owned parcels, most commonly referred to as tax parcels, maintained at the county level pursuant to Idaho Code requirements (Title 63) and Idaho State Tax Commission Rules and Regulations. Tax parcels are described as aliquot portions of PLSS divisions (i.e. sections, ¼ sections, ¼ ¼ sections, etc.), as platted subdivision lots (i.e. Sunnyside Additions Lot 2 Block 6), as metes and bounds descriptions - to which “Tax Numbers” are assigned for abbreviating complex descriptions for assessment notice purposes (i.e. Tax# 123456), and as variations of the above as portions of descriptions and/or remainders.

Core parcel attributes include the parcel outline (a polygon map feature), a parcel centroid, a parcel ID, a Geometry Source Reference and date (survey, deed, etc.) , an Owner Source Reference and data (conveyance document, plat, etc.), Owner type (tribal, federal, state, county, local/municipal, private, non-profit, other, unknown), and Improved (whether the property has a structure or other development versus vacant and undeveloped). The initial availability of Geometry and Owner source information is anticipated to be variable between jurisdictions, and it is hoped that the adoption of the standards developed through this Plan will promote the collection and maintenance of this data over time.

Core-plus attributes are the attributes that add value to the parcel information and make the information more functional in many applications for the business processes. These are called Core Plus because these attributes have considerable variation from jurisdiction to jurisdiction. Core-plus attributes include Owner Name, Assessment/Value information, and assessment information metadata. Appropriate privacy policies regarding both intergovernmental and public availability of this data have yet to be developed and accepted, and will not be addressed in this Plan.

For E911, emergency response and homeland security applications, cadastral data is a primary dataset for determining ownership boundaries for contacting affected owners, cost-benefit analysis for estimating development costs as well as damage mitigation, for providing other descriptive information, and for providing an attribute base for the linking of other data for a wide variety of analysis purposes.

Background and Purpose: (required per BLM outline)

The Information Technology Resource Management Council (ITRMC) is the state of Idaho's Coordinating Council for Information Technology issues. ITRMC's vision is to assure standardized, effective, and efficient statewide access to information and services. ITRMC has taken a lead in addressing Geospatial Technology issues in the state by appointing a statewide GIS Task Force, employing a State GIS Coordinator and successfully lobbying the U.S. Geological Survey, Department of Interior, to place a Federal Framework Coordinator in Idaho. Both of these positions have been in place for a year with the task of developing a strategic vision for GIS integration among federal, state, local, tribal and private stakeholders.

One key task has been the formation of Technical Working Groups (TWG) to address standards and policies for the development and sharing of framework data. Framework data is defined as the commonly needed data themes that are developed, maintained and integrated by public and private organizations within a geographic area, typically statewide. Currently, there are TWG in Idaho focused on the following framework data sets: cadastral, geodetic control, ground transportation, hydrography, orthoimagery, governmental units, land use/land cover and elevation. Cadastral framework data is defined as publicly available land records information that is intended to be useable by all levels of government and the private sector. Cadastral data includes survey measurements, transactions related to interests in land, general property descriptions, and boundary and corner evidence data.

The Idaho Cadastral Framework Data Committee met in early March 2000. The goal of the meeting was to address current cadastral projects in the state and to explore pertinent questions to developing an integrated and dynamic cadastral database:

- What is the appropriate data model to manage the GCDB (Geographic Coordinate DataBase-US Department of Interior Bureau of Land Management database)?
- What organization will manage the database, including managing the updates to it?
- How should organizations that use the GCDB design their databases to integrate a dynamic parcel layer?

March 20-22, 2000, fourteen members of the Idaho Cadastral Framework Data Committee attended the Western Governors' Association (WGA) Cadastral Data and Policy Forum in Salt Lake City, Utah. As a result of those two meetings, the Idaho Cadastral Framework Data Committee met on June 1, 2000 and adopted the National Integrated Land Systems (NILS) as a model concept of operations and user requirements to serve as a model for the development of an Integrated Land System for Idaho.

This proposed Cadastral Plan for the State of Idaho defines a strategy for developing an integrated land system that supports the vision presented at the WGA Cadastral Data and Policy Forum. The plan embraces the spirit of the Office of Management and Budget's Information Initiative presented July 18, 2000. Idaho is committed to establishing an Implementation Team (I-Team) to align the needs and resources of our state, federal, local, tribal and private partners in the development of this comprehensive plan for enhancing the GCDB and our cadastral mapping procedures.

The purpose of this document is to define a strategy for implementing the Federal Geographic Data Committee's (FGDC) Cadastral Data Content Standard and the Spatial Metadata Standard while addressing the needs of Idaho for an integrated and seamless cadastral data model.